



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,752	03/23/2001	Heinrich Koehne	P66334US0	3481

136 7590 05/07/2003

JACOBSON HOLMAN PLLC  
400 SEVENTH STREET N.W.  
SUITE 600  
WASHINGTON, DC 20004

EXAMINER

MEDLEY, MARGARET B

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/744,752

Applicant(s)

KOEHNE ET AL.

Examiner

Margaret B. Medley

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

### DETAILED ACTION

This action is in response to Paper No. 9 date May 18, 2001 and to Paper No. 5 dated January 29, 2001. Applicants' amendments to claims 4-19 have been entered of record. The pending claims of record are claims 1-20.

The disclosure is objected to because of the following informalities: In the specification, abstract and drawings it is suggested that applicants should the degree as being "<sup>0</sup>C" and atmosphere as being (psig) pressure parameters instead of the degree as being "<sup>0</sup>K" and the bar pressure to avoid confusion.

Appropriate correction is required.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The exact composition of the claimed product is not explicitly defined and therefore it appears that claim 18 does not find support in the description of the instant specification. The examiner takes the position that the instant claimed product of claim 18 is produced by a method according to claim 1 that consists of fuel, an oxidant and the flue gases, because of the partial

Art Unit: 1714

conversion of the fuel. It appears that the composition is explicitly dependent on the operating parameters of the exothermic pre-actions.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is suggested that applicants should change the temperature of (<sup>0</sup>K) Kelvin to (<sup>0</sup>C) Celsius and change the pressure (bar) to (psig) atmosphere pressure to have consistency with most of the <sup>0</sup>C and atmosphere parameters used throughout the specification and drawing to avoid confusion.

In claim 2 line 1, for clarity it is suggested that applicants should insert after the term "wherein" the phrase "said fuel is essentially selected from" and delete the phrase at the end, "are essentially used as said fuels".

Claim 4 is confusing because it is unclear if the limitation is a further step and it is unclear if the step applies to step (a) or (b).

In claim 5 it is suggested that applicant should insert the term "further" after the term "is" for clarity.

In claim 9, line 1, it is suggested that applicant should insert the phrase "is utilized" after the phrase "to claim 1" for clarity and so as to be consistent with the first line of the paragraph bridging pages 13-14.

In line 1 of each of claims 10 and 11, it is suggested that applicants should insert the phrase "for providing gaseous fuels" after the phrase "to claim 1" for clarity and to be consistent with lines 4-5 of the bridging paragraph of pages 13-14.

In claim 14 it is suggested that applicant should insert the phrase for the type of process that is used to produce "fuel gas" because claim 9 does not appear to provide clear support for said limitation.

The said phrase "said fuel cell" of claim 15 lacks support from claim 9 but would have proper antecedent basis if it were made to depend from claim 14. Clarification is required.

In claim 17 it is suggested that applicant should insert the term "further" before the term "is" in line 2 for proper antecedent basis.

In claim 18 it is unclear as to the explicit composition of the product other than the composition being a fuel, an oxidant and fuel gases from the partial conversion of the said fuel.

The phrase "wherein the process is repeated using the product of step (b) of claim 9 as the starting fuel" in claim 19 is confusing because it is unclear as to how the fuel (b) can be used in a repeat step in claim 19 when it is used in claim 9. Clarification is requested.

Claim 20 is a device and appears to be improperly dependent upon the process claim 7. The claim is confusing as to what device is being claimed. It appears that only an oxidant nozzle is being claimed. Clarification is requested.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1714

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 18 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lucquin et al (Lucquin) FR 2,369,914.

Lucquin teaches and discloses fuel products produced from a cold flame utilized to enrich the fuel mixture wherein the products are produced from the combustion of waste optionally comprising a liquid substance. The examiner takes the position that the fuel reaction products of patentee are the same as those of the instant claims because the explicit composition of the claimed products have not been defined or described and are anticipated or in the alternative render obvious by the teachings of Lucquin.

Claim 20 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Read, Jr. et al (Read) 4,264,435.

Art Unit: 1714

Read teaches and discloses a reactor and/or burner means (12) and (10) of Fig. 1 with oxidant nozzle (18) of Fig. 1 for producing fuel composition in the presence of an oxidant in an adiabatic reactor that anticipates the instant claims.

Claims 1-17 is objected to as being based upon rejection under the second paragraph of 35 U.S.C. 112 because the claims appear to contain allowable subject matter and would be allowed based upon amendments to overcome the 112 issues made of record. The claims appear to be allowed over the prior art made of record in that the process utilizes a residence time for the mixture of the end products of the exothermic pre-actions of ( $t > 25$  ms) in the reaction chamber yielding a cold flame having an intensity and damping effect with liquid fuel producing an improved fuel-air mixture. Inhibition of ignitions in the under stoichiometric range and improve reliable operation of the cold flame is produced by specific measures of temperature regulation in the region of the cold flame by heat removal.

It is noted that on pages 23-24 of the instant specification that applicants have listed 13 references. The proper procedure for applicants placing references in an application is to place the references along with a description of the references under the section titled as "Background of the Invention" having a subsection titled "Description of the Related Art" that is found in the front section of the specification. If applicants want the references to be listed as prior art on the front of the application upon the allowance of the instant application then applicants are required to list the references on a PTOL-1449 Form and to supply copies of the references to the PTO.

The prior art cited but not applied further teaches method for treating a fuel by using exothermic pre-actions in the form of a cold flame.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret B. Medley whose telephone number is (703) 308-2518. The examiner can normally be reached on Monday--Friday from 7:30 a.m. to 6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
**MARGARET MEDLEY**  
**PRIMARY EXAMINER**

M.B Medley/dh  
May 6, 2003